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UNITED STATES DEPARTMENT OF AGRICULTURE — Radio Service — OFFICE OF INFORMATION

HOMEMAKERS' CHAT Saturday Sept. 2, 1939

(FOR BROADCAST USE ONLY)

SUBJECT:"PUTTING UP APPLE AND GRAPE JUICE AT HOME." Information from the Office of Experiment Stations, U.S.D.A.

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What's the best way to keep homemade fruit juice? How can I put up grape juice at home? Is there any good way to can fresh apple cider?

Questions like these come from housewives every year when orchards are full of apples and vines hang heavy with grapes. Though grape juice and apple cider are old favorites among the beverages, housewives haven't been entirely satisfied when they tried to put them up. The usual home methods of canning and preserving fruit haven't worked so well with the juices. Boiling juice to sterilize it, or even heating it in boiling water, spoils the fresh fruit flavor and often the color. So housewives are often disappointed to find their home-canned grape juice darker than the fresh juice, with a cooked taste, and dark gritty crystals in the bottom of the container. As for apple juice, that suffers even more in ordinary canning. In fact the flavor and color change so much that it is no longer the same beverage.

You can see why chemists at a number of State experiment stations have been working to find successful home methods for preserving these popular juices.

One of their first discoveries was that fruit juice doesn't need so much heat for sterilizing as the fruit itself does. Juice doesn't need to heat to boiling temperature. Simmering heat is enough. And that's all to the good for fresh flavor and color. The lower heat doesn't change the juice as much as boiling does.

Then they found that air in the jar had much to do with changing the flavor of juice as it stood. This is why commercial concerns now put up juice in a

vacuum. At home, you heat the juice to drive out air before it goes into jars, and then leave as little air-space as possible at the top of the jar.

The scientists also have found that cloudy juice has more of the natural fruit flavor than clear juice with all the particles carefully filtered out.

Recently scientists at the New York State Experiment Station have issued step-by-step directions for putting up grape juice at home. Their directions are for Concord grapes or other slip-skin varieties. These scientists emphasize 3 points for successful grape juice.

They say first that you must use fully ripe, sound, clean grapes. Unripe grapes give juice a harsh taste. Overripe, decayed or soiled grapes give an unpleasant or spoiled flavor.

The second point they emphasize is right temperature. To be sure of it, you need a good thermometer. Too much heat gives a cooked bitter flavor to the juice. Too little heat will not sterilize it for keeping. They advise heating the juice between 165 to 180 degrees Fahrenheit, never above 180.

Third about those gritty tartaric acid crystals that naturally form in grape juice , you can get rid of them by letting the juice stand a few months after the first pasteurizing. The particles will settle out and then you can strain the juice and pasteurize it again.

Briefly, the process recommended by the New York Station is to wash and stem the grapes and heat them in an aluminum or enamelware kettle until the juice flows easily and the color of the skins spreads through the whole mass. Then press the juice through a jelly bag, heat it to simmering temperature, and pour it hot into hot sterilized jars. Seal the jars and pasteurize by heating in the water bath for 20 minutes at simmering temperature. Now put the jars away in a cool dark place from 3 to 6 months. At the end of that time, strain the juice again to remove the particles at the bottom, heat the juice once more and pasteurize it in

sealed jars as you did before. If the juice isn't sweet enough, you can add sugar to taste before the final heating.

As for preserving apple juice or sweet cider, the scientists haven't yet discovered a simple home method that is completely successful. The Massachusetts Experiment Station workers suggest that if you have freezer-locker space, the easiest way to preserve cider is to freeze it. Cider, frozen solid in a closed container and stored at 10 degrees below zero, keeps from season to season without change in flavor.

You can also put up cider by pasteurizing as grape-juice is pasteurized. Put the heated cider into hot sterilized jars, seal the jars, and then heat them for 20 minutes in a water-bath at simmering temperature. This method keeps the cider from spoilage, but unfortunately it causes a soft brown sediment to settle at the bottom of jars unless the cider is clarified first. And clarifying requires special equipment. What's more, clarifying removes a good deal of flavor from juice.

The method of flash pasteurizing now used commercially is successful with cider. By this method the juice passes rapidly through very hot and then cold tubes. But most homes don't have the special equipment for it. The New York State workers say you can have a flash-pasteurizer built for about 15 dollars, but unless you're going into the cider business, you would hardly make that investment.

So, until the scientists discover better methods of preserving apple juice at home, you have your choice of freezing or pasteurizing in the water bath and straining off the brownish sediment before serving.

For grape juice the best home method is pasteurizing and then storing while the gritty particles settle, straining and pasteurizing again.

That's all the fruit-juice news for today.